ABSTRACT

An improved device for use in the manual sharpening of arrow broadheads, razor blades and the like includes a unique symmetrical clamp and axle assembly having interchangeable, matched pairs of special purpose jaw members for gripping blades of differing configurations. The clamp and axle assembly further includes a bolt, and a base plate. The base plate captures a pair of jaw members and the bolt head in combination. The bolt shaft extends outwardly from the base of the assembly through a hole in the center of the base plate. A cylindrical bearing is mounted on the forward end of the bolt shaft, and a quick-release fitting is mounted on the terminal end of the bolt shaft. The clamp and axle assembly is removably coupled to a hand-held frame which has a hole in its forward end to accept the cylindrical bearing, and a receptacle in the rear of the frame to accept and releasably retain the quick release fitting. A cylindrical roller mounted in a bracket at the forward underside of the frame serves to establish and maintain the sharpening angle, as the device is rolled along a sharpening surface, such as a whetstone. When coupled to the frame, the clamp and axle assembly is freely rotatable within the frame, and automatically rotates to align the edge of the blade with the surface of the whetstone on contact. Additionally this rotational capability enables the user to service both sides of the blades' edge with a single blade clamping operation, by manually rotating the clamp 180 degrees between passes along the surface of the whetstone.